बसर करने वाले लोगों के लिये स्वच्छ शौचालय केन्दीय प्रायोजित ग्रामीण स्वच्छता कार्यक्रम के अंतर्गत मुहैया कराए जाते हैं। केन्द्र सरकार के पास त्वरित ग्रामीण जल सप्लाई कार्यक्रम/केन्दीय प्रायोजित ग्रामीण स्वच्छता कार्यक्रम के अंतर्गत स्वीकृति हेतु कोई योजना लम्बित नहीं है।

Operational Services by the Department of Science and Technology

642. DR. SHRIKANT RAMCHANDRA JICHKAR: Will the PRIME MINISTER be pleased to state:

(a) what are the operational services provided by the Department of Science and Technology in the field of meteorology and surveys through IMD, the SOI and NATMO; and

(b) the manner in which these services have been modernised and how do they compare with similar services in other developed countries?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY, DEPARTMENT OF ELECTRONICS AND DEPARTMENT OF OCEAN DEVELOPMENT AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI P. R. KUMARAMANGALAM): (a) The operational services provided by the Department of Science and Technology in the field of meteorology, surveys through India Meteorological Department (IMD), Survey of India (SOI) and National Atlas & Thematic Mapping Organisation (NATMO) are:

INDIAN METEOROLOGICAL DEPARTMENT:

The India Meteorological Department (IMD) provides operational services in the field of meteorological and seismological observations data processing, data dissemination and weather forecast. Its operational activities in the field of weather forecasting includes warning against adverse weather conditions like cyclones and heavy rains, prediction of weather for agriculture, water management and other weather sensitive activities.

SURVEY OF INDIA:

Provision of Geodetic Control Network, Geodetic and Geophysical surveys and accurate fixing of outlying Islands through Geodetic Triangulation, Trilateration and Satellite Geodesy.

Provision of Topographical cover in surveying and Mapping for the entire country, to meet the national requirements, including those of Defence Forces.

Tidal Predictions for 44 ports in the Indian Ports in Burma, Iran, Sri Lanka and Sultanate of Oman, in the interest of good neighbourly relations.

Compilation/Mapping and Production of Geographical Maps e.g. Railway Map, Road Map, Political Map, Physical Map etc., and Aeronautical Maps and Charts.

Preparation of maps of the International Map of the World (IMW) Series and the World Aeronautical Chart (WAC) Series as an international commitment to the International Civil Aviation Organisation (ICAO).

Surveys for Development Projects, e.g., Power and Irrigation, Mineral Exploration, Urban and Rural Development etc.

Surveying and Mapping of Forest areas, Large Cities and preparation of Guide Maps of cities/towns and places of interest.

Standardisation of Geographical names based on phonetic and participation in the International Body set-up by UNO for this purpose.

Demarcation of the external boundaries of India, their correct depiction on Maps published within the country. Also advising the Government of India on the demarcation of Inter-state boundaries.

Training of officers and staff required for the Department, other Central and State Government Departments, and trainees from foreign countries sponsored by the Government of India.

Promotion of Research and Development activities in all fields connected with Surveying and Cartography, e.g. Geodesy, Photogrammetry, Thematic Mapping, production of three-dimensional maps, printing techniques etc.

Coordination and control in providing aerial photographic cover for the whole country.

NATIONAL ATLAS AND THEMATIC MAPPING ORGANISATION:

1. Revision of National Atlas.
2. Abridged Edition of National Atlas.
3. Landuse Mapping Atlas.
4. Landform Mapping Atlas.
5. Land Resource Atlas.
6. Student's Reference Atlas.
7. Socio-Economic Atlas.
8. Indian Ocean Realm Atlas.
9. District Planning Maps.

(b) Department of Science & Technology has undertaken steps to modernise the services of IMD, SOI and NATMO.

Improvement of weather forecasting is an ongoing process. Keeping pace with the development of Science and Technology, the India Meteorological Department is continuously upgrading its observational, communication, computational and weather forecasting capabilities by induction of modern equipment and techniques besides training of manpower. Fast computers and automatic high speed meteorological telecommunication systems are part of such systematic effort to modernise IMDS infrastructure. Availability of INSAT meteorological observational facility has strengthened the Department's capabilities further. In fact, IMD's Cyclone Warning facility has been recognised by the World Meteorological Organisation (WMO) as one of the three Regional Specialised Meteorological Centres for Cyclone Warning, the other two such centres being Tokyo and Miami. IMD's training facilities are recognised by WMO as a Regional Meteorological Training Centre for Asian region.

Survey of India has adopted digital technology to augment its potential. Three digital mapping centres have already been set up. The digital mapping centres will help in the formation of National Cartographic data base. The department is using Global Positioning Systems (GPS) in Geodetic works.

In NATMO also, Digital Mapping Systems are being set up.

As a result the facilities and capabilities of the above Organisations are comparable to those of the developed countries.

Installation of Meteorological Radar Near Tirupati

643. SHRI S.A AUSTIN: Will the PRIME MINISTER be pleased to state:

(a) whether the Indian Scientists have installed Meteorological Radar near Tirupati which can forecast weather for one year;

(b) whether this Radar can forecast about drought or more rains in any part of the country;

(c) by when the facility of weather forecast is likely to be available; and

(d) the expenditure incurred thereon?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) The Radar which has been commissioned near Tirupati is the Mesosphere, Stratosphere, Troposphere (MST) Radar. Test observations have already been carried out by the Radar. The facility will be made available to the scientists in the country for conducting different experiments to obtain very important information on atmospheric dynamics and turbulence. This project for the development and commissioning of MST Radar was taken up as a multi-agency funded activity to carry out fundamental research in the field of atmospheric dynamics and related phenomena. This Radar is different from a weather forecasting Radar which is used for operational purposes e.g., tracking of cyclones and depressions over the coastal regions.

(b) This Radar is not meant for forecasting weather, predicting drought affected areas or predicting the regions receiving heavy rainfall in any part of the country. The basic studies which are to be carried out using MST Radar will help improving the understanding of atmospheric phenomena particularly related to the wind fields, waves and turbulence. It is also expected that a better understanding of these atmospheric processes may provide additional inputs to the present system of weather forecasting which uses data from ground based, balloon and satellite sensors.

(c) The MST Radar has already been installed near Tirupati and the trial observations have been conducted. The scientific validation of the MST Radar data is currently in process after which the facility will become available for the user atmospheric scientists.

(d) An amount of Rs 8.77 crores has been spent for the development, installation and testing of the Radar. The amount has been pooled